



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,642	05/22/2001	John Andrew Aiken JR.	5577-234	8726

20792 7590 09/05/2007
MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627

EXAMINER

CHANG, JUNGWON

ART UNIT	PAPER NUMBER
----------	--------------

2154

MAIL DATE	DELIVERY MODE
-----------	---------------

09/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/862,642
Filing Date: May 22, 2001
Appellant(s): AIKEN ET AL.

MAILED

SEP 05 2007

Technology Center 2100

Elizabeth A. Stanek
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 12/1/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

Art Unit: 2154

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Alteon Web Systems, "The Next Step in Server Load Balancing," November, 1999.

6,252,878

Locklear et al.

6-2001

Applicant's admitted prior art, pgs. 2-3 of the specification

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1-4, 24 and 26** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the original disclosure does not appear to be enabling for the new limitation of "determining at the data processing system executing the application if a received request for the data processing system to originate a connection is associated with the application."

Art Unit: 2154

Applicant is respectfully requested to point out where this limitation is supported in the original disclosure or cancel the subject matter from the claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-4, 24 and 26** are rejected under 35 U.S.C. 102(b) as being anticipated by Alteon (Alteon Web Systems, "The Next Step in Server Load Balancing," November, 1999.) (hereinafter Alteon). Alteon is cited by the Applicant in IDS paper filed on 8/1/02.

5. **Examiner's Interpretation:** The Examiner interprets that Alteon teaches originating the connection at the application executing on the data processing system, because originating *the connection* does not necessarily require originating *the connection request*. In other words, Alteon teaches that the client originates the connection request (see pg. 1, Overview and pg. 5, TCP/IP Server Load-Balancing Operation). However, the connection itself is not established until the application sends a response to the client, which response includes the binding VIP address. Therefore, the connection itself originates at the application.

6. As for claims 1, 24 and 26, Alteon teaches a method of establishing a connection

Art Unit: 2154

originated by an application executing on a data processing system in a cluster of data processing systems, the method comprising:

associating a dynamic network address with the application at the data processing system on which the application is executing (pg. 1, Overview);

determining *at the data processing system executing the application* if a received request for the data processing system to originate a connection is associated with the application (pg. 1, Overview; pg. 5, TCP/IP Server Load-Balancing Operation); and

establishing the connection from the data processing system executing the application utilizing the associated dynamic network address as a source address for the connection if the request is associated with the application (pg. 5, TCP/IP Server Load-Balancing Operation, especially paragraph 4).

7. As for claim 2, Alteon teaches the method of claim 1, further comprising:

determining if the application has specified a network address for the requested connection (pg. 5, TCP/IP Server Load-Balancing Operation); and

utilizing the specified network address to establish the connection if the application has specified a network address (pg. 5, TCP/IP Server Load-Balancing Operation); and

wherein the step of establishing the connection further comprises selectively utilizing the associated dynamic network address as the source address for the connection if the application has not specified a network address for the requested connection (pg. 5, TCP/IP Server Load-Balancing Operation, especially paragraph 4).

8. As for claim 3, Alteon teaches the method of claim 2, wherein the step of determining if the application has specified a network address for the requested connection comprises determining if a socket for the connection has been bound to a network address (Note, a socket is merely an endpoint of a connection, typically identified by the address and/or port number. Therefore, binding an address and/or port number is equivalent to binding a socket. See cited definition from techdictionary.com.; pg. 5, TCP/IP Server Load-Balancing Operation).

9. As for claim 4, Alteon discloses the method of claim 1, wherein the application comprises one of a plurality of instances of an application executing on the data processing system in the cluster of data processing systems;

wherein the step of associating a dynamic network address with the application at the data processing system on which the application is executing comprises associating a dynamic network address with the one of the plurality of instances of the application at the data processing system on which the one of the plurality of instances of the application is executing (pgs. 1-2, Overview); and

wherein the step of determining if a request for the data processing system to originate a connection is associated with the application comprises determining if a request for the data processing system to originate a connection is associated with the one of the plurality of instances of the application (pgs. 1-2, Overview).

10. **Claims 5-13, 15-22, 25 and 27** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Alteon in view of Locklear et al. (US 6,252,878 B1) (hereinafter Locklear).

11. **Examiner's Interpretation:** The Examiner interprets that Alteon teaches originating the connection at the application executing on the data processing system, because originating *the connection* does not necessarily require originating *the connection request*. In other words, Alteon teaches that the client originates the connection request (see pg. 1, Overview and pg. 5, TCP/IP Server Load-Balancing Operation). However, the connection itself is not established until the application sends a response to the client, which response includes the binding VIP address. Therefore, the connection itself originates at the application. The Examiner further interprets that the "switch server" of Alteon is part of the data processing system.

12. As for claim 5, 25 and 27, Alteon discloses a method of selecting a source address for a connection originated by an application executing on a data processing system in a cluster of data processing systems, comprising:

associating a dynamic virtual IP address (DVIPA) with the application at a communication protocol stack of the data processing system in the cluster of data processing systems so as to utilize the DVIPA as the source address for the connection originated by the application (pgs. 1-2, Overview; pg. 5, TCP/IP Server Load Balancing Operation, especially paragraphs 1-4; The Examiner notes that a communication protocol stack is inherent for processing TCP/IP communications. See cited definition

from techdictionary.com.).

13. As for claim 6, Alteon discloses a method of claim 5, wherein the step of associating a DVIPA with the application comprises:

receiving a connection request for a connection at the communication protocol stack (pg. 1, Overview, second paragraph);

determining if the connection request received at the communication protocol stack is associated with the application (pg. 1, Overview, fourth paragraph; pgs. 9-11, especially Persistence Policies, Hash and SSL Session Tracking); and

selecting the DVIPA as the source address for the connection if the connection request is associated with the application (pg. 5, TCP/IP Server Load-Balancing Operation, especially paragraphs 1-4).

14. As for claim 7, Alteon discloses the method of claim 6, further comprising:

determining if the application is bound to an IP address (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation); and

selecting the IP address to which the application is bound as the source address if the application is bound to an IP address (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation; see also pgs. 9-11, especially Persistence Policies and Hash); and

wherein the step of selecting the DVIPA comprises selecting the DVIPA as the source address for the connection if the connection request is associated with the

application and the application is not bound to an IP address (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

15. As for claim 8, Alteon discloses the method of claim 7, further comprising:

establishing at the communication protocol stack a predefined association of the DVIPA and the application;

wherein the step of determining if the connection request received at the communication protocol stack is associated with the application comprises determining if the connection request is from the application (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation); and

wherein the step of selecting the DVIPA as the source address for the connection if the connection request is associated with the application comprises selecting the DVIPA as the source address for the connection if the connection request is from the application and a predefined association of the DVIPA and the application has been established (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

16. As for claim 9, Alteon discloses the method of claim 8, wherein the step of establishing at the communication protocol stack a predefined association of the DVIPA and the application comprises processing at the communication protocol stack a configuration statement which specifies the DVIPA and an application with which the DVIPA is associated (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP

Art Unit: 2154

Server Load-Balancing Operation).

17. As for claim 10, Alteon discloses the method of claim 8, further comprising:
determining if the DVIPA is configured for the communication protocol stack (pg.

7, TCP Connection Monitoring); and

generating an error message if the DVIPA is not configured for the
communication protocol stack (pg. 7, TCP Connection Monitoring).

18. As for claim 11, Alteon discloses the method of claim 8, further comprising:
determining if the DVIPA is active on the communication protocol stack (pg. 5,

TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing
Operation);

activating the DVIPA if the DVIPA is not active and if the DVIPA is in a range of
DVIPAs specified for the communication protocol stack (pg. 5, TCP/IP Server Load-
Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

19. As for claim 12, Alteon discloses the method of claim 11, further comprising
generating an error message if the DVIPA is not active and is not in a range of DVIPAs
specified for the communication protocol stack (pg. 7, TCP Connection Monitoring).

20. As for claim 13, Alteon discloses the method of claim 6, wherein the application
comprises an instance of a plurality of instances of an application executing on the data

processing system (pg. 7, TCP Connection Monitoring).

21. As for claim 15, Alteon discloses a system for establishing a connection between an application and a client, the system comprising:

a cluster of data processing systems (Fig. 2);

the application executing on a data processing system in the cluster of data processing systems (pg. 3, Applications); and

a communication protocol stack on the data processing system in the cluster of data processing systems, the communication protocol stack being configured to associate a dynamic virtual Internet protocol address (DVIPA) with the application so that the DVIPA is utilized as a source address for a connection request from the application (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

22. As for claim 16, Alteon discloses the system of claim 15, wherein the communication protocol stack is further configured determine if the application is bound to an IP address, select the IP address to which the application is bound as the source address if the application is bound to an IP address and select the DVIPA as the source address for the connection if the connection request is from the application and the application is not bound to an IP address (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

23. As for claim 17, Alteon teaches the system of claim 15, wherein the communication protocol stack is further configured to establish a predefined association of the DVIPA and the application and select the DVIPA as the source address for the connection if the connection request is from the application and a predefined association of the DVIPA and the application has been established (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

24. As for claim 18, Alteon teaches the system of claim 17, wherein the communication protocol stack is further configured to establish the predefined association of the DVIPA and the application by processing a configuration statement which specifies the DVIPA and an application with which the DVIPA is associated (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

25. As for claim 19, Alteon teaches the system of claim 17, wherein the communication protocol stack is further configured to determine if the DVIPA is configured for the communication protocol stack and generate an error message if the DVIPA is not configured for the communication protocol stack (pg. 7, TCP Connection Monitoring).

26. As for claim 20, Alteon teaches the system of claim 17, wherein the communication protocol stack is further configured to determine if the DVIPA is active on

the communication protocol stack and activate the DVIPA if the DVIPA is not active and if the DVIPA is in a range of DVIPAs specified for the communication protocol stack (pg. 5, TCP/IP Server Load-Balancing Operation; pgs. 5-6, UDP/IP Server Load-Balancing Operation).

27. As for claim 21, Alteon teaches the system of claim 20, wherein the communication protocol stack is further configured to generate an error message if the DVIPA is not active and is not in a range of DVIPAs specified for the communication protocol stack (pg. 7, TCP Connection Monitoring).

28. As for claim 22, Alteon teaches the system of claim 15, wherein the application comprises an instance of a plurality of instances of an application executing on the data processing system (pg. 7, TCP Connection Monitoring).

Claim Rejections - 35 USC § 103

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. **Claims 14 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Alteon in view of Locklear and in further view of Applicant's admitted prior art (pgs. 2-3 of the specification) (hereinafter AAPA).

Art Unit: 2154

31. As for claims 14 and 23, Alteon and Locklear do not specifically teach using an OS/390 Sysplex system. Applicant admits that it is well-known in the art to use an OS/390 Sysplex system for managing the assignment of virtual addresses. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Alteon and Locklear by using an OS/390 Sysplex system in order to manage the assignment of virtual addresses, as taught by AAPA above.

(10) Response to Argument

A. Rejection of Claims 1-4, 24 and 26 Under 35 U.S.C. 102

(1) Applicant's Argument: As a preliminary note, the Final Office Action contains "Examiner's Interpretation" sections on pages 4 and 6 thereof. This portion of the Office Action states:

The Examiner interprets that Alteon teaches originating the connection at the application executing on the data processing system, because originating *the connection* does not necessarily require originating *the connection request*. In other words, Alteon teaches that the client originates the connection request (see pg. 1, Overview and pg. 5, TCP/IP Server Load-Balancing Operation). However, the connection itself is not established until the application sends a response to the client, which response includes the binding VIP address. Therefore, the connection itself originates at the application.

See Final Office Action, page 3, paragraph 9 and page 6 paragraph 16 (emphasis in original). Applicant asserts that Appellants submit that interpreting responding to a connection request from a client as "establishing the connection from the data processing system executing the application" is not a reasonable interpretation of the claim recitations and ignores the plain language of the claims.

Examiner's Response: Appellant is associating the claimed "establishing the

connection from the data processing system executing the application” with the Examiner’s Interpretation. This is a misinterpretation of the Examiner’s interpretation. The Examiner’s interpretation is responding to the preamble, “establishing a connection originated by an application executing on a data processing system”. Furthermore, Alteon explicitly discloses establishing a connection from the data processing system executing the application (Fig. 1; pg. 5, TCP/IP Server Load-Balancing Operation, paragraphs 1-3, “the Web Switch recognizes when a client is requesting a new TCP session by identifying TCP SYN packet...The request is forwarded to the best available server”, paragraph 4, “it replaces the real server’s actual IP address in the Network Layer source address field with the VIP and forwards each modified frame to the client”).

(2) Applicant’s Argument: Applicant asserts that nothing in Alteon discloses or suggests establishing a connection as recited in Claim 1.

Examiner’s Response: Alteon explicitly discloses establishing a connection (Fig. 1; pg. 5, TCP/IP Server Load-Balancing Operation, paragraphs 1-3, “the Web Switch recognizes when a client is requesting a new TCP session by identifying TCP SYN packet...The request is forwarded to the best available server”, paragraph 4, “it replaces the real server’s actual IP address in the Network Layer source address field with the VIP and forwards each modified frame to the client”).

(3) Applicant’s Argument: Applicant asserts that the switch sits between the client

and the server or group of servers, therefore, the switch may perform address substitution in both directions. See Alteon, page 5, TCP/IP Load-Balancing Operation, paragraph 4. In contrast, Claim 1 recites associating a dynamic network address with the application at the data processing system on which the application is executing. Thus, the dynamic network address is associated with the application at the data processing system (server) executing the application. As discussed above, Alteon assigns and substitutes the virtual IP address at the switch and this substitution is transparent to the server. Thus, Alteon not only discusses the association at the switch, not at the server, but the server is not even aware of the association. Accordingly, nothing in the cited portion of Alteon appears to disclose or suggest associating a dynamic network address as recited in Claim 1.

Examiner's Response: In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., associating at the server) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, on page 18, lines 21-24 of the present application, which states in part:

Similarly, the distributing processor (50, fig. 1) may be a data processing system or other network device, or portion thereof, capable of carrying out the operations described herein.

Therefore, the "Server Switch" of Alteon (Fig. 1; pg. 4, paragraph 9, "the Web Switch,

Art Unit: 2154

with server load balancing, acts as a virtual front-end processor”) is equivalent to the claimed the data processing system. Accordingly, Alteon clearly discloses associating a dynamic network address (i.e., IP address) (pg. 1, Overview, “virtual IP address”, pg. 5, paragraphs 1 and 7, “virtual IP address”).

(4) Applicant’s Argument: Applicant asserts that thus, it is determined if the request is associated with the **application** and it is done at the data processing system (server) executing the application.

Examiner’s Response: Once again, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., server) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, on page 18, lines 21-24 of the present application, which states in part:

Similarly, the distributing processor (50, fig. 1) may be a data processing system or other network device, or portion thereof, capable of carrying out the operations described herein.

Therefore, the “Server Switch” of Alteon (Fig. 1; pg. 4, paragraph 9, “the Web Switch, with server load balancing, acts as a virtual front-end processor”) is equivalent to the claimed the data processing system. Accordingly, Alteon clearly discloses determining if a request is associated with the application (pg. 1, Overview; pg. 5, TCP/IP Server

Load-Balancing Operation, "the Web Switch recognizes when a client is requesting a new TCP session by identifying TCP SYN packet").

(5) Applicant's Argument: Applicant asserts that the "Response to Arguments" section of the Final Office Action states that "the Examiner finds that the 'application' may be interpreted as the 'session' of Alteon, which runs on both the web switch and the server." See Final Office Action, page 13. Appellants once again point out the Examiner cannot just "interpret" the reference so that it reads on the pending claims.

Examiner's Response: The Examiner finds that applicant has not explicitly defined the term 'application' in the specification. Therefore, any application performing the functions claimed is sufficient to anticipate an "application". Alteon clearly discloses an application (pg. 1, Overview, "web switches dynamically distribute load across a group of servers running a common application or set of applications"; pg. 3, Applications, "Server load balancing supports many TCP-based or UDP-based applications where common content is available across a group of servers").

(6) Applicant's Argument: Applicant asserts that as discussed above, the connection in Alteon is not established at the data processing system (server) executing the application, it is established at the switch. Accordingly, nothing in Alteon discloses or suggests establishing a connection as recited in Claim 1 for at least these additional reasons.

Examiner's Response: Examiner reiterates all arguments above. In response to

Art Unit: 2154

applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., server) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, on page 18, lines 21-24 of the present application, which states in part:

Similarly, the distributing processor (50, fig. 1) may be a data processing system or other network device, or portion thereof, capable of carrying out the operations described herein.

Therefore, the "Server Switch" of Alteon (Fig. 1; pg. 4, paragraph 9, "the Web Switch, with server load balancing, acts as a virtual front-end processor") is equivalent to the claimed the data processing system. Accordingly, Alteon explicitly discloses establishing a connection (Fig. 1; pg. 5, TCP/IP Server Load-Balancing Operation, paragraphs 1-3, "the Web Switch recognizes when a client is requesting a new TCP session by identifying TCP SYN packet...The request is forwarded to the best available server", paragraph 4, "it replaces the real server's actual IP address in the Network Layer source address field with the VIP and forwards each modified frame to the client").

B. Dependent Claim 2 is Separately Patentable over the Cited Reference

(1) Applicant's Argument: Applicant asserts that appellants submit that the cited reference does not disclose or suggest such a selective use of a dynamic network

address and a specified network address to originate connection as recited in Claim 2.

Examiner's Response: The examiner respectfully disagrees. Alteon explicitly teaches a selective use of a dynamic network address (i.e., IP address) and a specified network address to originate connection (pg. 5, paragraph 2, "clients who wish access the load-balanced application will be directed by DNS to send their requests to the VSG hosting the application"; pg 5, TCP/IP Server Load-Balancing Operation, paragraphs 1-4; pg. 10, Hash, "with this policy, **the server is chosen based on source IP address**...The IP address is used to generate an index into a table that contains all servers in Virtual Server Group...**Since server selection is based on source IP**, all requests from a given user are sent to the same server).

II. The Section 103 Rejections

A. Independent Claims 5, 25 and 27 are Patentable over the Cited References

(1) Applicant's Argument: Applicant asserts that in any event, the cited portions of Alteon describe the source address substitution to include the virtual address as the source address of response from the applications at the switch, not at the data processing system executing the application.

Examiner's Response: Once again, on page 18, lines 21-24 of the present application, which states in part:

Similarly, the distributing processor (50, fig. 1) may be a data processing system or other network device, or portion thereof, capable of carrying out the operations described herein.

Therefore, the "Server Switch" of Alteon (Fig. 1; pg. 4, paragraph 9, "the Web Switch,

Art Unit: 2154

with server load balancing, acts as a virtual front-end processor”) is equivalent to the claimed the data processing system. Accordingly, Alteon explicitly discloses associating a dynamic virtual IP address with the application at the communication protocol stack of the data processing system in the cluster of data processing systems executing the application so as to utilize the DVIPA as the source address for the connection originated by the application (pgs. 1-2, Overview; pg. 5, TCP/IP Server Load Balancing Operation, especially paragraphs 1-4; The Examiner notes that a communication protocol stack is inherent for processing TCP/IP communications. See cited definition from techdictionary.com).

(2) Applicant’s Argument: Applicant asserts that thus, if the connection between the switch and the server is considered the connection originated at the data processing system executing the application, there is no use of the VIP between the server and the switch.

Examiner’s Response: The Examiner respectfully disagrees. Alteon explicitly teaches a use of the VIP between the server and the switch (Fig. 1; pg. 1, Overview, “the client access the service using a virtual IP address that resides in a Web Switch that front-ends the real servers...As connection requests arrive for the virtual service, the Web Switch passes these request on to one of the real servers in the Virtual Server Group; pg. 4, last paragraph, “a VIP address is configured for each VSG, i.e., virtual server group, presenting a single address for the server group to the rest of the network”).

(3) Applicant's Argument: Applicant asserts that appellants are not merely claiming originating requests at application servers but having the application server select a virtual IP address when an application originates the request.

Examiner's Response: Once again, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., application server) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, Alteon explicitly teaches selecting a dynamic virtual IP address when an application originates the request (pg. 5, paragraph 2, "clients who wish access the load-balanced application will be directed by DNS to send their requests to the VSG hosting the application"; pg 5, TCP/IP Server Load-Balancing Operation, paragraphs 1-4; pg. 10, Hash, "with this policy, **the server is chosen based on source IP address**...The IP address is used to generate an index into a table that contains all servers in Virtual Server Group...**Since server selection is based on source IP**, all requests from a given user are sent to the same server).

(4) Applicant's Argument: Applicant asserts that the switch, as discussed above, is not part of the cluster of data processing systems as interpreted by the Examiner for at least the reasons discussed above.

Examiner's Response: Once again, on page 18, lines 21-24 of the present

Art Unit: 2154

application, which states in part:

Similarly, the distributing processor (50, fig. 1) may be a data processing system or other network device, or portion thereof, capable of carrying out the operations described herein.

Therefore, the "Server Switch" of Alteon (Fig. 1; pg. 4, paragraph 9, "the Web Switch, with server load balancing, acts as a virtual front-end processor") is equivalent to the claimed the data processing system. Accordingly, Alteon explicitly discloses associating a dynamic virtual IP address with the application at the communication protocol stack of the data processing system in the cluster of data processing systems executing the application so as to utilize the DVIPA as the source address for the connection originated by the application (pgs. 1-2, Overview; pg. 5, TCP/IP Server Load Balancing Operation, especially paragraphs 1-4; The Examiner notes that a communication protocol stack is inherent for processing TCP/IP communications. See cited definition from techdictionary.com).

B. Independent Claim 15 is Patentable over the Cited References

(1) Applicant's Argument: Applicant asserts that with regard to Claim 15, Appellants submit that claim 15 is not disclosed or suggested by the cited references for reasons analogous to those discussed above with reference to Claims 5, 25 and 27.

Examiner's Response: Claims 5, 25 and 27 are properly rejected under 35 U.S.C. 103(a). Therefore, claim 15 is properly rejected under 35 U.S.C. 103(a), for the same reasons.

(2) Applicant's Argument: Applicant asserts that the switch, as discussed above, is not part of the cluster of data processing systems as interpreted by the Examiner for at least the reasons discussed above.

Examiner's Response: Once again, on page 18, lines 21-24 of the present application, which states in part:

Similarly, the distributing processor (50, fig. 1) may be a data processing system or other network device, or portion thereof, capable of carrying out the operations described herein.

Therefore, the "Server Switch" of Alteon (Fig. 1; pg. 4, paragraph 9, "the Web Switch, with server load balancing, acts as a virtual front-end processor") is equivalent to the claimed the data processing system. Accordingly, Alteon explicitly discloses associating a dynamic virtual IP address with the application at the communication protocol stack of the data processing system in the cluster of data processing systems executing the application so as to utilize the DVIPA as the source address for the connection originated by the application (pgs. 1-2, Overview; pg. 5, TCP/IP Server Load Balancing Operation, especially paragraphs 1-4; The Examiner notes that a communication protocol stack is inherent for processing TCP/IP communications. See cited definition from techdictionary.com.).

C. Dependent Claims 7 and 16 are Separately Patentable over the Cited References

(1) Applicant's Argument: Applicant asserts that Appellants submit that each of the dependent claims is patentable at least as depending from a patentable base claim. For

example, recitations regarding the selective use of virtual and specified address, discussed above with respect to Claim 2, are also found in for example, Claims 7 and 16.

Examiner's Response: Claims 5 and 15 are properly rejected under 35 U.S.C. 103(a), and Claim 2 is properly rejected under 35 U.S.C 102(b). Therefore, claims 7 and 16 are properly rejected under 35 U.S.C. 103(a), for the same reasons.

IV. The Section 112 Rejections – Claims 1-4, 24 and 26

(1) **Applicant's Argument:** Claims 1-4, 24 and 26 stand rejected under 35 U.S.C. 112 as failing to comply with the written description requirement. In particular, the Final Office Action states: "the original disclosure does not appear to be enabling for the new limitation of "determining at the data processing system executing the application if a received request for the data processing system to originate a connection is associated with the application." For at least the reasons discussed above with respect to the objection to the specification, Appellants respectfully submit that this recitation of Claims 1, 24 and 26 is enabled by the specification. In particular, as stated in the specification:

Operations for initialization of a source address selection module or circuit 62 according to embodiments of the present invention will now be described with reference to **Figure 2**. As seen in **Figure 2, it may be determined if a configuration specification for a data processing system, for example for a communication protocol stack of the data processing system, includes a statement which identifies a source IP address and one or more application instances which are associated with the source IP address** (block 200). If so, the data processing system associates the application instance(s) and the specified source IP address (block 210). Such association may be provided on multiple data processing system and, in fact, the same source IP address may be associated with application instances on different data processing systems.

Art Unit: 2154

The specification only supports “determining if a configuration specification for a data processing system includes a statement which identifies a source IP address and one or more application instances which are associated with the source IP address”.

However, there is nothing to support the limitation of “determining if **a received request** for the data processing system **to originate a connection** is associated with the application.”

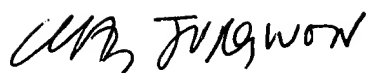
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

Art Unit: 2154

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Jungwon Chang
April 16, 2007

Conferees:

Nathan J. Flynn



NATHAN FLYNN
SUPERVISORY PATENT EXAMINER



JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100